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THE NEW ENGLAND BOTANICAL CLUB

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SOME NORTH AMERICAN REPRESENTATIVES OF *BRAYA HUMILIS*.

M. L. FERNALD.

BRAYA HUMILIS (C. A. Meyer) Robinson, var. *novae-angliae* (Rydberg), n. comb. *Pilosella novae-angliae* Rydberg, Torrey, vii. 158 (1907). *Arabidopsis novae-angliae* Britton in Britton and Brown, Ill. Fl. ed. 2, ii. 176 (1913), as to the plant of Willoughby Mountain, Vermont.

In 1907 Rydberg proposed as a species the well-known plant of the Willoughby cliffs which has been passing as *Braya humilis*, transferring it to Kosteletzky's genus *Pilosella* and calling it *P. novae-angliae*, distinguished from true *Braya humilis* by "the more compact habit, the scant pubescence, the smaller flowers, the more slender pod, and the longer style;" and in 1913, Britton, putting the Willoughby plant into Schur's *Arabidopsis*, stated that the pods are "glabrous" and he included with the Willoughby material the plants of Anticosti and of the north shore of Lake Superior.

The writer has not seen the Lake Superior material, but two collections from Anticosti show that there the plant has the pods quite as pubescent as in authentic material from the Altai of Meyer's *Sisymbrium humile*, which formed the basis of *Braya humilis* Robinson. Similarly the plant of western Newfoundland, as well as from Severn River, Keewatin, and the Columbia Valley, British Columbia, closely matches in habit, pubescent pods, size of flowers, and all other characters the Altai plant; i. e., *Braya humilis* is scattered across boreal America and the Anticosti plant, at least as represented in the Gray Herbarium, does not have a *glabrous* pod. Furthermore, a large

series of specimens (25 collections) from Willoughby, in all stages of development, shows that the young pods are distinctly pubescent but in maturity become glabrate, so that at best the Willoughby plant is a weak variety.

Arabidopsis Schur, Enum. Pl. Trans. 55 (1866) which had but a single species, *A. Thaliana* (L.) Schur,¹ based on *Arabis Thaliana* L., has the same type as *Pilosella* Kostel. Enum. Hort. Prag. 104 (1844) and as *Stenophragma* Čelak.² and, although *Arabidopsis* is said to go back to DeCandolle's *Sisymbrium*, section *Arabidopsis*, it is noteworthy that Schur recognized only the single species *A. Thaliana* and that the latter plant was placed by DeCandolle under *Arabis* not under *Sisymbrium*, sect. *Arabidopsis*.

Whether or not *Pilosella* Kostel. (*Arabidopsis* Schur or *Stenophragma* Čelak.) is treated as a distinct genus or as a subgenus of *Sisymbrium*, its status as a genus or as a subgenus is at once invalidated by thrusting into it species of *Braya* Sternb. & Hoppe, Regensb. Denkschr. i. pt. 1, 65 (1815). And surely no one who will take the time and trouble to examine with moderate power the septum of *Pilosella novae-angliae* Rydb. or *Arabidopsis novae-angliae* Britton can doubt that this plant is a *Braya*. The fact that the Willoughby and Anticosti plant has the septum of *Braya* and not of *Sisymbrium* and *Arabidopsis* or *Stenophragma* has already been pointed out by Robinson.³ Microscopic examination of the septa of many specimens, from Newfoundland, Anticosti, Willoughby, Keewatin, British Columbia and Siberia of *Braya humilis*; of the northwestern species labeled in Rydberg's own hand *Pilosella Richardsonii* Rydb.; of the Arctic *B. purpurascens* (R. Br.) Bunge; of the European *B. alpina* Sternb. & Hoppe, and of several other boreal species, shows clearly that these plants all have the characteristic septum of *Braya*, with the thick-walled cells elongated transversely. Furthermore, the starved and dwarfed material of *Braya humilis* (the American specimens of which are included by Britton in *Arabidopsis novae-angliae*) from

¹ This appears in the Illustrated Flora, ed. 2, as *Arabidopsis Thaliana* (L.) Britton, but Schur published the name in 1866 when he published the genus.

² *Index Kewensis* cites *Stenophragma* Čelak. as published in Arch. Naturw. Landesd. Boehm. iii. 445 (1875); Britton starts it in Flora, iv. 438 (1872), but in the latter very critical discussion of the characters of the genus Čelakovsky himself states that the genus, based on *Arabis Thaliana*, was published by him in his *Flora der Prager Umgegend* (1870), a work to which the present writer has been unable to refer.

³ Robinson in Gray, Syn. Fl. i. pt. I, 141 (1895).

exposed ledges and shingle on Table Mt., Port à Port Bay, Newfoundland (*Fernald & St. John*, no. 10,837), although clearly a dwarfed alpine extreme of the Anticosti and Keewatin and Altai plant, is so like Huter's specimens of *Braya alpina* from the Carinthian Alps (Fl. Exsicc. Austr.-Hung. no. 580) as to be separated only by its more slender pods. *Braya humilis*, *Pilosella* (or *Arabidopsis*) *novae-angliae* and *P. Richardsonii* are, likewise, distinctly perennial plants, in this agreeing with the other species of *Braya*, not with the annual *Arabidopsis Thaliana*.

Besides *Braya humilis*, which occurs in northwestern America in Alaska and British Columbia, there is another western species, in the mountains of Alberta and British Columbia. This is

BRAYA Richardsonii (Rydberg), n. comb. *Pilosella Richardsonii* Rydberg, *Torrey*, vii. 159 (1907).

GRAY HERBARIUM.

AMARANTHUS POWELLII AND DIGITALIS LANATA IN NEW ENGLAND.— Three plants, recognized as something different, sprang up in the garden of Mr. John Robinson at Salem, Massachusetts, this season. They were allowed to grow and on July 12 were collected and taken to the Gray Herbarium, and determined as *Amaranthus Powellii* Wats. from the far west. My attention is called to the fact that this species has been found as a weed in cultivated ground at Tewksbury by Messrs. *E. F. Williams & W. P. Rich*, in 1900, and on a roadside at Weston by Mr. Williams some years earlier: see *RHODORA*, xvii. 179 (1915).

The collection of Essex County plants is indebted to Mrs. Paul A. Dodge of Rowley for fine specimens of a conspicuous and attractive adventive from the Danube River region — *Digitalis lanata* Ehrt. This was discovered growing rankly on a heap of rakings at the foot of Ox Pasture Hill in Rowley. Further search and inquiry secured the information that this species had probably been introduced in soil with plants imported from Holland, and that it was not uncommon in a limited station on the hill.— ALBERT P. MORSE, Peabody Museum of Salem, Massachusetts.

EXOTIC PLANTS ESTABLISHED IN MIDDLESEX
COUNTY, MASSACHUSETTS.

WILLIAM BREWSTER.

Two sisters, Miss Mary S. and Miss Harriet L. Eaton, living not far from the village centre of Concord, Massachusetts, at the rear of Sleepy Hollow Cemetery, are interested in birds and wild flowers and have long been familiarly acquainted with most of those occurring regularly in that neighborhood. Behind their house and cultivated grounds lies a neglected, grassy field, crowning a wind-swept hill-top. Here, some six or seven years ago, they found a yellow-flowered Vetch, growing in arid, rather sandy soil. Then represented by only a few plants it has since so increased and spread that it now covers a space ten or fifteen feet across with a tangled mat of semiprostrate stems and foliage, to the almost complete exclusion of all other vegetation. When first shown to me on June 27 of the present year, by Miss Mary Eaton, it was apparently passing out of bloom and already bearing pea-like pods in various stages of development although still adorned with many bright yellow flowers. Specimens of it taken then and there with Miss Eaton's kind permission have since been deposited in the Gray Herbarium where it has been identified as *Lathyrus pratensis*. According to the latest edition of Gray's Manual this species, naturalized from Europe, occurs in "fields and waste places," locally, from New Brunswick to New York and Ontario. It was reported from Concord about nineteen years ago by Mr. A. W. Hosmer, RHODORA, i. 223 (1899), and it may be of interest that it has persisted until this time. The specimen, deposited in the Gray Herbarium, is doubtless the one which formed the basis of the recent record in RHODORA, xx. 108 (1918).

After visiting the bed of *Lathyrus*, Miss Eaton and I were returning towards her house when some handsome tall shrubs or small trees, scattered along the line of a brush-grown stone wall, attracted our attention. In all there may have been ten or a dozen of them, varying in height from two or three to six or seven feet. They looked not unlike young Tupelos, having similarly smooth, glossy, obovate leaves and sparsely-distributed, reddish, berry-like fruit. But their

leaves were smaller than those of the Tupelo and the fruit proved on close examination, to be three- instead of one-seeded. Although Miss Eaton had seen them there before she could not name them, nor could I. We then thought they might have "escaped" from the neighboring Cemetery where, of course, all manner of exotic plants are, or may be, introduced from time to time. Only a few days later, however, I came upon two others near our farm house and at a distance of almost three miles from Sleepy Hollow. They were growing beside a cart path that crosses low-lying, peaty land once cultivated but now for the most part densely thicketed with high blueberry bushes, alders, maples, gray birches, etc. Here they must have been established for many a year, being apparently mature although no more than seven or eight feet tall. This, however, is said to be about the maximum height of the species which proves to be *Rhamnus Frangula* L., a Buckthorn, native to Europe and given in the Manual as established in Ontario, on Long Island and in northern New Jersey. It was kindly determined for me at the Gray Herbarium, from specimens of its branches, leaves and fruit obtained at Concord. These, I understand, are the first that the Herbarium has received from any locality in New England, although the species has recently been reported, in RHODORA, xix. 230 (1917), as found near New Haven, Connecticut, by Prof. G. E. Nichols.

Thus are we once more reminded of Thoreau's humorous maxim: "*Ne quid quæsieris extra te Concordiamque.*"

CONCORD, MASSACHUSETTS.

A SMOOTH-FRUITED FORM OF ASCLEPIAS SYRIACA.

J. R. CHURCHILL.

OUR common Milkweed (*Asclepias syriaca* L.) is abundant in Berkshire County, Massachusetts, as elsewhere, growing in open fields and along the roads and streams everywhere. Ordinarily it is easily recognized in flower by its stout and simple stem and its many large umbels of fragrant purplish flowers, and later, in fruit, by the large pointed mostly curved or falcate pods, which are softly tomentose and all "echinate" with warts or "soft spinous processes." The "echinate" pod is a diagnostic character by which this and a western species similar in this respect, are segregated in our manuals from the other species with smooth or unarmed pods.

So, on September 14, 1918, while botanizing in that part of Lanesboro, Massachusetts, called Berkshire, I was greatly interested to find growing in low open ground, with plants having the normal echinate fruit, a small colony of our Milkweed, bearing pods which were all straight, quite unarmed, and merely velvety. There was no vestige or rudiment of the spinous processes. Recourse to my herbarium also disclosed a plant, which I collected at Grafton, Massachusetts, Sept. 7, 1902, on which the two ripe pods were, like those from Berkshire, short, straight and quite smooth. Evidently I had noted and preserved the specimen, as often happens, for the very reason that, in the complete absence of the spinous processes, it conspicuously failed to conform to the echinate character ascribed to the fruit in this species. Nevertheless I had called it, "*A. Cornuti* Decaisne," the name by which this species was then known; and itself, curiously though unintentionally, suggestive of the "horns" which are normally present.

The only reference which I have found to this aberrant form is in the Supplement to the Synoptical Flora of N. A. Vol. II, Part I, where (p. 401) is the following note by Dr. Gray:—"*A. CORNUTI* Decaisne, p. 91.—*A. grandiflora*, Bertol. Misc. Bot. xii. 47, t. 3, 4, 5, raised from seed from North America, by its flowers and follicles can be no other than this common Milkweed. Pods in this species are sometimes found with hardly a trace of the soft spinous processes,

sometimes with very long and shaggy ones." And this note is based upon a sheet in the Gray Herbarium containing six, more or less smooth-fruited inflorescences only, over the following label "Smooth and muricate follicles of *Asclepias Cornuti*, sent by...."

In the private herbarium of Walter Deane, at Cambridge, also I find a similar series of follicles collected by J. H. Mellichamp in South Carolina, verified by Dr. Gray, and also "illustrating variation to smooth pod." Two other specimens of the smooth-fruited form may also be cited, one collected by Mr. Deane, at Waltham, Massachusetts, August 13, 1910, now in his herbarium, the other in the herbarium of the New England Botanical Club, collected by Sydney Harris, at Dedham, Massachusetts, September 27, 1896, both with unarmed fruit like my Berkshire material.

Apparently then the echinate character in pods of this species, heretofore so much relied upon, is not invariable, and it seems well to recognize so signal a departure from an established and familiar type. I have therefore ventured to call this Berkshire plant, with wholly unarmed follicles

ASCLEPIAS SYRIACA L. forma **inermis**, f. n., formae typicae similis differt folliculis omnino emuricatis saepius rectis.—Low open ground, Lanesboro, Massachusetts, September 14, 1918, *Churchill* (TYPE deposited in the herbarium of the New England Botanical Club).

The closely similar specimens cited above from eastern Massachusetts and South Carolina would seem to indicate that this smooth-fruited form will be found widely distributed with the typical echinate-fruited one. Further study may disclose other differences which would justify a varietal or higher rank than seems at present warranted.

DORCHESTER, MASSACHUSETTS.

REPORTS ON THE FLORA OF THE BOSTON
DISTRICT,—XXIX.

TEPHROSIA.

T. virginiana (L.) Pers. Dry sandy soil; well distributed but not very abundant.

TRIFOLIUM.

T. AGRARIUM L. Fields and roadsides, common throughout.

T. ARVENSE L. Dry sandy soil, very common throughout.

T. DALMATICUM Vis. Dump, Dracut or Lowell (*C. W. Swan*, Aug. 6, 1884). Specimen in herb. N. E. Botanical Club. Adventive from Europe.

T. DUBIUM Sibth. Waste land, S. Boston (*C. E. Faxon*, Sept. 30, 1878); sporadic in lawn, Hingham (*C. H. Knowlton*, June —, 1916).

T. ECHINATUM Bieb. Wool-waste, Westford (*Miss E. F. Fletcher*, RHODORA xvii. 32, 1915). Native of southern Europe and Asia Minor.

T. HYBRIDUM L. Fields and roadsides, everywhere.

T. INCARNATUM L. Fields, occasionally persisting for one season after cultivation.

T. MACRAEI Hook. & Arn. Parker River mills, Georgetown (*Mrs. C. N. S. Horner*, —, 1886); wool-waste, N. Chelmsford (*W. P. Alcott*, no date). Specimens in herb. N. E. Botanical Club. Native of western North America and Chili.

T. MEDIUM L. Dry fields and pastures; many old specimens from Salem, Wenham and Danvers; also collected from Georgetown (*E. F. Williams*, July 10, 1901) and from Boston (*Asa Gray*, no date).

T. PRATENSE L. Fields and roadsides, everywhere.

T. PROCUMBENS L. Roadsides and fields, frequent.

T. PURPUREUM Lois. Westford (*Miss E. F. Fletcher*, RHODORA xv. 172, 1913). Native of southern Europe and western Asia.

T. repens L. Fields and pastures everywhere.

T. RESUPINATUM L. South Boston (*C. E. Perkins*, Aug. 9, 1879).

Native of western Europe and the Mediterranean region. Specimen in herb. N. E. Botanical Club.

T. TOMENTOSUM L. Georgetown mills (*Mrs. C. N. S. Horner*, —, 1886). A very small specimen in herb. N. E. Botanical Club. Native of the Mediterranean region.

TRIGONELLA.

T. LACINIATA L. Charlestown (*C. E. Perkins*, July 4, 1879).

T. NOEANA Boiss. (*T. Cassia* Boiss. of Dame & Collins, Flora Middlesex Co. 26, 1888). Waste-heap, Lowell (*C. W. Swan*, Aug. 4, 1884).

T. RAMOSA L. Charlestown (*C. E. Perkins*, July 4, 1879).

The above specimens are in herb. N. E. Botanical Club.

VICIA.

V. ANGUSTIFOLIA Reichard. Waste ground, Lowell, Lynn, Wellesley and S. Boston.

V. ANGUSTIFOLIA Reichard, var. *SEGETALIS* (Thuill.) Koch. Waste places frequent. "On ye beach at Nehant" (*M. Cutler*, no date). Specimen in Gray Herb.

V. ANGUSTIFOLIA Reichard, var. *UNCINATA* (Desv.) R. & F. Dry gravel in field, Hingham (*C. H. Knowlton*, June 22, 1912).

V. Cracca L. Fields and roadsides, frequent.

V. HIRSUTA (L.) S. F. Gray. Waste places, rare; Newburyport, W. Newbury, Danvers, Lowell, Dracut, Boston, Hingham, Wellesley.

V. SATIVA L. Waif in garden, Topsfield (*Mrs. C. N. S. Horner*, no date); Jamaica Plain (*C. E. Faxon*, —, 1882).

V. TETRASPERMA (L.) Moench. Waste places and edges of woods, occasional.

V. VILLOSA Roth. Persistent after cultivation at Marshfield and Sherborn; perhaps elsewhere.

C. H. KNOWLTON } Committee on
WALTER DEANE } Local Flora.

ERRATA.

- Page 26, line 16, for *Rhynchospora* read *Rynchospora*.
" 35, " 28, for **glandulosum** read GLANDULOSUM.
" 71, " 2, for *grandifolia* read *grandiflora*.
" 87, " 6, for ARKANSANA read ARKANSANUS.
" 87, " 7, for *arkansana* read *arkansanus*.
" 91, " 10, for arid read acid.
" 124, " 9, for Cheshire read Hillsboro.
" 184, " 15, for Thumb. read Thunb.
" 186, " 34, for *Balsamea* read *balsamea*..

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